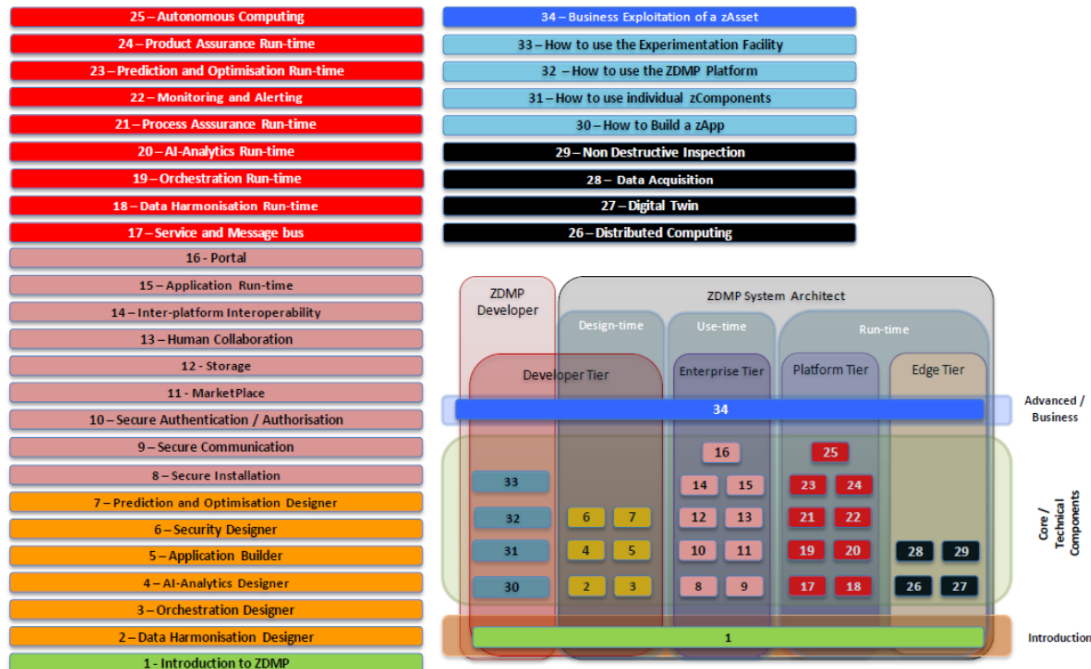


The ZDMP Virtual Academy implements a training curriculum that has the goal to give a general introduction into ZDMP ecosystem with a clear set of instructions in how to install and use the various components available.

ZDMP targets the following groups of potential users, namely:

- **Business Owners:** Individual that owns a business entity and has decision-making abilities
- **Developers:** Individuals who are directly involved in development of industrial/oriented solutions
- **System Architects:** Individuals, who participate in the system design, including identification of infrastructure, technologies, protocols, architectures. System Architects identify the system “shape” which later is implemented by developers
- **Production Managers:** Participate in the planning, co-ordination, and control of industrial processes. They ensure that products are manufactured efficiently with the right amount and appropriate quality
- **Students:** Ones who will occupy the leading positions within the industry, so the awareness and up-to-date knowledge can make a critical difference
- **Researchers:** Professionals in the area, who analyze and assess the proposed solutions, raising discussion on various aspects and indicating some open research questions that might contribute to scientific and practical issues

The scope of the training curriculum is presented in the figure below in which ZDMP ecosystem is considered from the architectural and ZDMP developer viewpoints. ZDMP developer-oriented training addresses the external developers that are supposed to use the ZDMP ecosystem including the “how-to-use” aspects. The training courses devoted to the technical components are tightly bound to the ZDMP ecosystem architecture considering the run-time, design-time, and use-time components. This separation allows identification of the components inside the Edge Tier through the models established at the design-time inside the Developer Tier, whereas capturing the context and reflecting behavioral parameters at the run-time inside the Platform Tier. In its turn, the use-time components are the ones allowing secure access and utilization of ZDMP platform.



The overall architecture of the ZDMP technical assets is based on 4-tier model. The tiers are the following: **Developer Tier**, **Platform Tier**, **Enterprise Tier** and **Edge Tier**. The main task of the **Edge Tier** is to enable the data collection from various heterogeneous sources such as sensors, actuators, devices, and system components. It also allows some critical functionality to be delivered in the close proximity to the data sources, which might be useful in the case of asynchronous data exchange patterns. The **Enterprise Tier** is responsible for implementing the high-level communication among various users, as well as aspects related to running of the containers. This tier delivers the components for set up and maintaining the platform, whereas not providing any core functionality of the ZDMP. On the other hand, in the **Platform Tier** the core functionalities covering monitoring, alerting, high-level orchestration of the platform components and data processing are implemented. And finally, the **Developer Tier** targets particular users' needs and requirements. The components of this tier are provided as containers allowing building the complex applications comprised of containers to be later uploaded to the Marketplace.

Additionally, there are the introduction of zAssets videos that represent examples of applications implemented using features of different ZComponents. And there are a set of specific courses to explain how to implement such zApps (applications), and how to use the ZDMP Platform and its components on its support.